What Is Claimed Is:

1. A camshaft assembly comprising a tubular shaft and a plurality of cams which are each provided with an aperture and which are slid on to the tubular shaft and secured thereto at distances from one another, wherein, between the cams, the tubular shaft comprises inwardly hot-formed lateral indentations.

2. A camshaft according to claim 1, wherein, at the indentations, there are formed projections which surround said indentations and which increase the outer diameter of the tubular shaft beyond the cross-section of the through-apertures of the cams.

3. A camshaft according to claim 1, wherein, in the region of the cams, the tubular shaft comprises cold-formed circumferential cross-sectional enlargements for securing the cams.

4. A camshaft according to claim 3, wherein the cross-sectional enlargements cooperate with smooth cylindrical through-apertures of the cams, extend concentrically relative to the tubular shaft, and form press-fits together with the cams.

5. A camshaft according to claim 4, wherein the cross-sectional enlargements each extend at least along the axial length of a cam.

6. A camshaft according to claim 1, wherein regions adjacent the indentations have substantially the same outer diameter as the tubular shaft.

7. A camshaft according to claim 6, wherein, in the region of the cams, the tubular shaft comprises surface projections for securing the cams, the surface projections increasing the cross-sectional dimension of the tubular shaft.

8. A camshaft according to claim 1, wherein the lateral indentations extend transversely to the length of the tubular shaft.

9. A camshaft according to claim 1, wherein the indentations approximately correspond to partial -cylindrical penetrations of the tubular member.

10. A camshaft according to claim 1, wherein the indentations, at an inner face of the tube, approximately extend as far as to the longitudinal tube axis.

11. A camshaft according to claim 1, wherein the indentations are all orientated in the same way with respect to their circumferential position on the tubular shaft.

12. A method of producing a camshaft comprising:

providing a tubular shaft;

sliding a plurality of cams, each having a through-aperture, onto the tubular shaft;

securing the cams onto the tubular shaft at defined distances from each other;

locally heating the tubular shaft between at least two cams; and

hot-forming a lateral indentation in the shaft in the locally heated region.

13. A method according to claim 12 comprising forming projections surrounding the indentation to increase the outer diameter of the tubular shaft beyond the cross-section of the through-apertures of the cams.

14. A method according to claim 12 comprising, after the step of sliding and prior to hot-forming, radially outwardly cold-forming cross-sectional enlargements on the tubular shaft in the region of at least one cam.

15. A method according to claim 14 wherein the step of cold-forming includes sequentially applying a hydraulic internal pressure to the tubular shaft to form press-fits with the cams.

16. A method according to claim 12 wherein the step of hot-forming occurs with the tubular shaft clamped in a die such that in regions adjacent the indentation, the original outer diameter of the tubular shaft is substantially maintained.

17. A method according to claim 12 wherein the cams are slid onto the shaft after the step of hot-forming the indentations.

18. A method according to claim 12 wherein the indentations are formed sequentially by introducing local mechanical force at the locally heated region in the radial direction relative to the longitudinal axis of the shaft.

19. A method according to claim 18 comprising, during the step of introducing, providing a bending moment into the tubular shaft around an axis perpendicular relative to the direction of the mechanical force to cause a bend of the tubular shaft, wherein the center of the bend is positioned on a side opposing the mechanical force.

20. A method according to claim 19 wherein the bend is dimensioned such that, after cooling, the longitudinal axis of the tubular shaft is aligned.

21. A method according to claim 12 wherein the step of locally heating includes electric resistance heating a locally delimited region of the tubular shaft.

22. A method according to claim 21 wherein a flow of current is locally delimited between at least two opposed electrodes at the tubular shaft and occurs substantially transversely to the longitudinal axis of the shaft.

23. A method according to claim 22 comprising introducing a mechanical force on the shaft with at least one of the electrodes.

24. A method according to claim 12 comprising, while locally heating, maintaining longitudinal portions of the shaft carrying the cams at a temperature which prohibits changes in structure or stress in the shaft at said portions.

25. A method according to claim 12 wherein all hot-formed indentations are formed simultaneously.

26. An apparatus for producing lateral indentations in an assembled camshaft having a tubular shaft and a plurality of cams which are each provided with a through-aperture and which are slid on to the tubular shaft and secured thereto at distances from one another, the apparatus comprising:

a clamping device for the camshaft;

at least one heating device which permits local heating of individual longitudinal portions between the cams; and

at least one forming punch for radially locally introducing mechanical force into the heated tubular member for carrying out a hot-forming operation between the cams.

27. An apparatus according to claim 26, wherein the clamping device comprises several lower supporting bearing shells and

several upper supporting bearing shells, an axial fixing device, and a fixing device for angles of rotation.

28. An apparatus according to claim 26, wherein the at least one forming punch, towards the tubular shaft, comprises an approximately semi-cylindrical cross-section whose axis crosses the longitudinal axis of the shaft perpendicularly.

29. An apparatus according to claim 26, wherein the heating device is a resistance heating device including electrodes positioned at the tubular member and wherein current flows via the tubular shaft.

30. An apparatus according to claim 29, wherein a first electrode is formed by the at least one forming punch and a second electrode is formed by a lower supporting bearing shell.

31. An apparatus according to claim 29, wherein one first electrode is axially arranged on one side of the at least one forming punch and a second electrode is axially arranged on the other side of the at least one forming punch.

32. An apparatus according to claim 31, wherein the electrodes are annular electrodes.

33. An apparatus according to claims 27, wherein, in a longitudinal section through a center line of the clamping device, defined

by the centers of the supporting bearing shells, the lower supporting bearing shells comprise an external curvature which points towards the forming punch.

34. An apparatus according to claims 27, wherein the lower supporting bearing shells and upper supporting bearing shells are alternately arranged so as to be axially spaced relative to one another.

35. An apparatus according to claim 34, wherein relative to two adjoining upper supporting bearing shells, the lower supporting bearing shells are individually displaceable towards the forming punch relative to the longitudinal axis of the clamping device.

36. An apparatus according to claim 27, wherein a center line of the clamping device, defined by the centers of the supporting bearing shells, forms a bent line which, together with a feed axis of the forming punch, delimits a plane and whose outer curvature points towards the forming punch.